IN THE CLAIMS:

1. (Currently Amended) A line node for a communication network, the line node being bidirectionally coupled to at least one first terminal through at least one first link and to at least one second terminal through at least one second link, the line node comprising:

at least one first communication path having a first end coupled to the at least one first link and a second end coupled to the at least one second link, the at least one first communication path for routing signals received from the at least one first terminal towards the at least one second terminal;

at least one splitter having an input, a first output, and a second output, the input and the first output being coupled in the at least one communication path, the at least one splitter being responsive to receiving a signal for outputting first and second signal portions through the first and second outputs, respectively;

a first switch having an output coupled to the at least one second link, wherein the second output of the at least one splitter is connected directly to the first switch and not through another splitter;

a detector configured and positioned to detect a failure in the at least one first communication path by monitoring a predetermined point in the at least one first communication path; and

a controller coupled to the detector and to the first switch, the controller being responsive to the detector detecting a failure in the at least one first communication path for controlling the first switch to couple the second output of the splitter to the at least one second link, for routing the second signal portion towards the at least one second terminal.

2. (Previously Presented) A line node as set forth in Claim 1, further comprising:

at least one second communication path having a first end coupled to the at least one first link and a second end coupled to the at least one second link, the at least one second communication path for routing signals received over the at least one second link from the second terminal towards the first terminal; and

at least one second switch having an input coupled to the at least one second link;

wherein the detector is also for detecting a failure in the at least one second communication path, and the controller is responsive to the detector detecting a failure in the at least one second communication path for controlling the second switch to couple the at least one second link to the at least one first link, for routing signals received from the at least one second terminal over the at least one second link towards the at least one first terminal.

3. (Previously Presented) A line node as set forth in Claim 1, wherein the line node comprises a plurality of the first communication paths, and the at least one splitter includes a plurality of splitters, each of the splitters having an input and a first output that are both coupled in a respective one of the first communication paths, each of the splitters also having a second output, the first switch having a plurality of inputs coupled to the second outputs of the splitters, respectively, and wherein the controller controls the first switch to couple the second output of the splitter coupled in the path in which the failure is detected to the at least one second link.

4. (Previously Presented) A line node as set forth in Claim 2, wherein the line node comprises a plurality of the second communication paths, and the at least one second switch includes a switching device and a plurality of switching elements, the switching device having an input coupled to the at least one second link and a plurality of outputs, each switching element having a first input coupled in a respective one of the second communication paths, a second input coupled to a respective one of the outputs of the switching device, and an output coupled to the at least one first link, and wherein the controller responds to the detector detecting a failure in a second communication path by controlling the switching device to couple signals received over the at least one second link to the second input of the switching element coupled in that path, and by controlling that switching element to further couple those signals to the at least one first link.

5. (Previously Presented) A line node as set forth in Claim 4, wherein the detector also detects when individual ones of the second communication paths become active, and the controller responds thereto by controlling a corresponding one of the switching elements to couple signals in that path to the at least one first link, for routing those signals towards the at least one first terminal.

6. (Previously Presented) A line node as set forth in Claim 1, wherein the controller also is coupled to the other node, and is responsive to the detector detecting the failure for notifying the other node of the detected failure.

7. (Previously Presented) A line node as set forth in Claim 1, wherein the controller also is coupled to the other node, and is responsive to at least one of the detector detecting the failure and the line node receiving information from the other node indicating that a failure has been detected in that node for controlling the first switch to couple the second signal portion to the at least one second link.

8. (Previously Presented) A line node as set forth in Claim 3, further comprising a multiplexer interposed between the at least one second link and the plurality of splitters, the multiplexer having an output coupled to the at least one second link, the multiplexer also having and a plurality of inputs, each of which is coupled to a first output of a respective one of the splitters.

9. (Previously Presented) A line node as set forth in Claim 8, further comprising a first transponder and plurality of second transponders, the first transponder being interposed between an output of the first switch and another input of the multiplexer, the second transponders being interposed in respective ones of the first communication paths between the splitters of those paths and the multiplexer.

10. (Previously Presented) A line node as set forth in Claim 1, wherein the detector detects the failure in the at least one communication path by detecting a loss of light in the path.

11. (Currently Amended) A line node for a communication network, the line node being coupled to each of a plurality of first terminals through both a first link and a separate second link, the line node also being coupled to at least one second terminal through at least one third link, the line node comprising:

a plurality of communication paths for routing signals being communicated between the first terminals and the at least one second terminal, each communication path having a first end coupled to a respective one of the first links and a second end coupled to the at least one third link;

a switch having a plurality of first terminals and a second terminal, each of the first terminals of the switch being coupled to a respective one of the second links, the second terminal of the switch being coupled to the at least one third link;

a detector configured and positioned to detect a failure in at least one of the communication paths by monitoring a predetermined point in the at least one communication path; and

a controller, coupled to the detector and to the switch, and being responsive to the detector detecting a failure in a communication path for controlling the switch to couple a corresponding one of the second links to the at least one third link, for providing an alternate route through those links for routing the signals,

wherein the first and second links are each communicatively bidirectional.

12. (Previously Presented) A line node as set forth in Claim 11, wherein each of the first terminals provides signals to the line node over either the first or second link coupled thereto, depending on which link is determined to be active by that terminal.

13. (Original) A line node as set forth in Claim 11, wherein each of the first terminals accepts signals from either the first or second link coupled thereto, depending on which link is determined to be active by that terminal.

14. (Previously Presented) A line node as set forth in Claim 11, wherein the line node is coupled to the at least one second terminal through both the at least one third link and at least one other node, and the controller is coupled to the at least one other node, and is responsive to the detector detecting the failure for notifying the at least one other node of the detected failure.

15. (Previously Presented) A line node as set forth in Claim 11, wherein the line node is coupled to the at least one second terminal through both the at least one third link and at least one other node, wherein the controller is coupled to the at least one other node, and is responsive to at least one of the detector detecting the failure in the communication path or the controller receiving from the other node information indicating that a failure has been detected in that node for controlling the switch to couple a corresponding one of the second links to the at least one third link.

16. (Previously Presented) A line node as set forth in Claim 11, further comprising a multiplexer/demultiplexer interposed between the at least one third link and the plurality of communication paths, the multiplexer/demultiplexer having a terminal coupled to the at least one third link and a plurality of other terminals each of which is coupled to the second end a respective one of the communication paths.

17. (Previously Presented) A line node as set forth in Claim 11, further comprising a multiplexer/demultiplexer interposed between the at least one third link and the plurality of communication paths, the multiplexer/demultiplexer having a terminal coupled to the at least one third link and a plurality of other terminals each of which is coupled to the second end a respective one of the communication paths.

18. (Previously Presented) A line node as set forth in Claim 11, further comprising a plurality of transponders, each of which is interposed in a respective one of the communication paths.

19. (Previously Presented) A line node as set forth in Claim 18, further comprising another transponder interposed between an output of the switch and the at least one third link.

20. (Previously Presented) A line node as set forth in Claim 19, further comprising a multiplexer/demultiplexer interposed between the at least one third link and the

communication paths, the multiplexer/demultiplexer having one terminal coupled to the at least one third link and a plurality of other terminals, each of which is coupled to a respective one of the transponders.

21. (Previously Presented) A line node as set forth in Claim 18, wherein the controller also is responsive to the detector detecting the failure in the communication path for controllably disabling the transponder interposed in that path.

22. (Previously Presented) A line node as set forth in Claim 18, wherein the detector also detects when individual ones of the communication paths become active, and the controller is responsive thereto for controllably enabling the transponders interposed in those paths.

23. (Previously Presented) A line node as set forth in Claim 11,

wherein the line node is coupled to the at least one second terminal through both the at least one third link and at least one other node,

wherein the line node further comprises a plurality of the second terminals,

wherein the other node is coupled to each second terminal through both a fourth link and a fifth link, and wherein the other node comprises:

a plurality of further communication paths for routing signals being communicated between the first and second terminals through the other node, each further

communication path having a first end coupled to the at least one third link and a second end coupled to a respective fourth link;

a further switch having a plurality of first terminals and a second terminal, each of the first terminals of the further switch being coupled to a respective fifth link, the second terminal of the further switch being coupled to the at least one third link;

a least one detector for detecting a failure in at least one of the further communication paths; and

a further controller, coupled to the at least one detector and to the further switch, and being responsive to the at least one detector detecting a failure in at least one of the further communication paths for controlling the further switch to couple a corresponding one of the fifth links to the at least one third link, for providing an alternate route through those links for routing the signals.

24. (Previously Presented) A line node as set forth in Claim 23, wherein the controller of the line node is coupled to the further controller of the other node, and at least one of the controller and the further controller notifies the other controller of a detection of a failure in a communication path.

25. (Previously Presented) A line node as set forth in Claim 23, wherein the controller also is coupled to the further controller, and the controller is responsive to receiving from the further controller an indication that a failure has been detected in one of the further communication paths for controlling the switch to couple a corresponding one

of the second links to the at least one third link, for providing an alternate route for routing the signals through those links.

26. (Previously Presented) A line node as set forth in Claim 11, wherein the detector detects the failure in the at least one communication path by detecting a loss of light in the path.

27. (Previously Presented) A line node, the line node being coupled to at least one first terminal through both a first link and a second link, to at least one second terminal through each of a third link, a fourth link, and a fifth link, and to at least one third terminal through at least one sixth link, the line node comprising:

a plurality of communication paths for routing signals being communicated between the first and third terminals and between the second and third terminals through the line node, the communication paths including at least one first communication path, at least one second communication path, and at least one third communication path, each at least one first communication path having a first end coupled to a respective one of the first links and a second end coupled to the at least one sixth link, each at least one second communication path having a second end coupled to the at least one sixth link, and each at least one third communication path having a first end coupled to the third link and a second end coupled to the at least one sixth link;

at least one splitter, each at least one splitter having an input and first and second outputs, the input and first output of the at least one splitter being coupled in a corresponding one the first communication paths;

a first switch having an input terminal coupled to the at least one sixth link, and a plurality of output terminals, at least one of which is coupled to a corresponding one of the fifth links;

a plurality of second switches, a first input terminal of at least one of the second switches being coupled to the second output of a corresponding one of the splitters, a second input terminal of that at least one second switch being coupled to a corresponding one of the fourth links, and an output terminal of that at least one second switch being coupled to the at least one sixth link, and wherein a first input terminal of at least one other second switch is coupled to a first end of a corresponding one of the second communication paths, a second input terminal of that at least one other second switch is coupled to a corresponding one of the output terminals of the first switch, and an output terminal of that at least one other second switch is coupled to a corresponding one of the second links;

a detector configured and positioned to detect a failure in at least one of the first, second, or third communication paths; and

a controller, coupled to the detector, and being responsive to the detector detecting a failure in one of the communication paths for controlling one or more of the first and second switches to couple either the second output of a corresponding splitter, or a

corresponding one of the second, fourth, or fifth links, to the at least one sixth link, for routing signals therethrough.

28. (Previously Presented) A line node as set forth in Claim 27, wherein the controller is responsive to the detector detecting a failure in the first communication path for controlling the at least one second switch to couple the second output of the splitter to the at least one sixth link.

29. (Previously Presented) A line node as set forth in Claim 27, wherein the controller is responsive to the detector detecting a failure in the second communication path for controlling the first switch and the at least one other second switch to couple the at least one sixth link to a corresponding one of the second links.

30. (Previously Presented) A line node as set forth in Claim 27, wherein the controller is responsive to the detector detecting a failure in the third communication path for controlling either the first switch to couple the at least one sixth link to a corresponding one of the fifth links, or the at least one second switch to couple the fourth link to the at least one sixth link.

31. (Previously Presented) A line node as set forth in Claim 27, wherein the at least one second terminal transceives signals over the third link coupled thereto if that link is determined to be active by the terminal, provides signals over the fourth link coupled

thereto if that link is determined to be active by the terminal, and accepts signals from the fifth link coupled thereto if that link is determined to be active by the terminal.

32. (Previously Presented) A line node as set forth in Claim 27, wherein the controller is coupled to at least one other node through the at least one sixth link, and the controller is responsive to receiving information from the other node indicating that a failure has been detected in a communication path of that node for controlling a corresponding one or more of the first and second switches to couple either the second output of a corresponding splitter, or a corresponding one of the second, fourth, or fifth links, to the at least one sixth link.

33. (Previously Presented) A line node as set forth in Claim 27, further comprising a multiplexer/demultiplexer having a first terminal, a second terminal, and a plurality of third terminals, wherein the first terminal of the multiplexer/demultiplexer is coupled to the at least one sixth link, the second terminal of the multiplexer/demultiplexer is coupled to the input terminal of the first switch, at least one of the third terminals of the multiplexer/demultiplexer is coupled to the second end of that at least one first communication path, and at least another one of the third terminals of the multiplexer/demultiplexer is coupled to the second end of the at least one third communication path.

34. (Previously Presented) A line node as set forth in Claim 33, further comprising:

a plurality of first transponders, each of which is interposed in a respective one of the first, second, and third communication paths; and

a second transponder interposed between the input terminal of the first switch and the second terminal of the multiplexer/demultiplexer.

35. (Previously Presented) A line node as set forth in Claim 27, wherein the detector detects the failure in the at least one of the first, second, or third communication paths by detecting a loss of light in the at least one path.

36. (Currently Amended) A communication network, comprising:

at least one first terminal;

at least one second terminal;

at least one third terminal;

a plurality of links; and

at least one first node, bidirectionally coupled to both the at least one first terminal through at least a first bidirectional one of the links and to the at least one second terminal through at least a second bidirectional one of the links, the at least one first node also being coupled to the at least one first terminal through ~~an~~ additional links, and being coupled to the at least one third terminal through further links, the at least one first node comprising:

a plurality of first communication paths, each of the first communication paths being coupled at a first end thereof to at least one corresponding first link, wherein second ends of the first communication paths are all coupled to the at least one second link, for providing a communication route between the first and second links,

at least one first alternate communication path having first and second sub-paths, a first end of each of which is coupled to the at least one second link and a second end of each sub-path being coupled to a respective one of the additional links,

at least one further communication path coupled at a first end thereof to at least one corresponding further link, and coupled at a second end thereof to the at least one second link, for providing a communication route between that further link and the second link,

at least one splitter having an input terminal and a first output terminal that are both coupled in the further communication path, and also having a second output,

at least one first switch having an output coupled [[to]] in the first sub-path of the at least one first alternate communication path, ~~and~~ a first input ~~coupled~~ to a first one of the additional links through the ~~at least one first alternate communication path,~~ first sub-path but not through any splitter, and a second input coupled to the second output of the at least one splitter,

at least one other switch having an input coupled in the second sub-path of the at least one first alternate communication path, a first output coupled to a second one of the additional links through the second sub-path but not through any splitter, and also having a second output,

at least one further switch having a first input coupled the second link, a second input coupled to the second output of the at least one other switch, and an output coupled to at least another one of the further links,

a first detector for detecting a failure in at least one of the ~~plurality of~~ first communication paths or further communication path, and

a first controller ~~coupled to the first detector and to the at least one first switch, the first controller being~~ responsive to the first detector detecting a failure in at least one of the first communication paths for performing at least one of controlling the at least one first switch to couple the ~~at least one first alternate communication~~ first sub-path and the first additional link to the second link, for routing a signal between the ~~at least one~~ first and second terminals through the ~~at least one~~ first ~~alternate communication~~ sub-path and the first additional link, and controlling the at least one other switch to couple the second sub-path and the second additional link to the second link, for routing a signal between the first and second terminals through the second sub-path and the second additional link, the controller also being responsive to the first detector detecting a failure in the further communication path by performing at least one of controlling the at least one first switch to couple the second output of the splitter to the at least one second link through the at least one alternate communication path, and controlling the further switch and the other switch to couple the second output of the other switch to the other corresponding further link.

37. (Previously Presented) A communication network as set forth in Claim 36, further comprising at least one second node interposed between the at least one second link and the at least one second terminal, the at least one first and second nodes being coupled together through the at least one second link, the at least one second node being coupled to the at least one second terminal through at least one third link, and wherein the at least one second node comprises:

a plurality of second communication paths, each having a first end and a second end, the first ends of the second communication paths being coupled to the at least one second link, the second end of each second communication path being coupled to a corresponding third link, for providing a communication route between the second and third links,

at least one second alternate communication path having a first end coupled to the at least one second link,

at least one second switch coupled to the at least one second alternate communication path,

a second detector for detecting a failure in at least one of the plurality of second communication paths, and

a second controller coupled to the second detector and to the at least one second switch, the second controller being responsive to the second detector detecting a failure in at least one of the second communication paths for controlling the at least one second switch to couple the at least one second alternate communication path to a corresponding

third link, for routing a signal between that at least one second link and the third link through the at least one second alternate communication path.

38. (Currently Amended) A communication network as set forth in Claim 37, wherein the first and second detectors detect the failure in ~~the first and second~~ communication paths~~, respectively,~~ by detecting a loss of light in those respective paths.

39. (Previously Presented) A communication network as set forth in Claim 37, wherein the at least one first node further comprises at least one first multiplexer/demultiplexer, the at least one second node further comprises at least one second multiplexer/demultiplexer, and wherein each of the first communication paths is coupled to a respective one of the second communication paths through the at least one second link and the first and second multiplexer/demultiplexer.

40. (Canceled)

41. (Previously Presented) A communication network as set forth in Claim 37, wherein the second switch has an input terminal and a plurality of output terminals, the input terminal of the second switch being coupled in the at least one second alternate communication path, and wherein the second node further comprises a plurality of third switches, each third switch having a first input terminal coupled in a corresponding one of the second communication paths, a second input terminal coupled to a corresponding one

of the output terminals of the second switch, and an output terminal coupled to the at least one third link, and wherein the second controller responds to the second detector detecting a failure in a second communication path by controlling the second switch to couple signals received over the at least one second link to the second input terminal of the third switch coupled in the path, and by controlling that third switch to further couple those signals to the at least one third link.

42. (Previously Presented) A communication network as set forth in Claim 40, wherein the first node further comprises a multiplexer having an output coupled to the at least one second link, a first input coupled to an output of the first switch, and a plurality of second inputs each of which is coupled to a second end of a corresponding one of the first communication paths.

43. (Previously Presented) A communication network as set forth in Claim 40, wherein the first node comprises a plurality of transponders, individual ones of the transponders being interposed in respective ones of the first communication paths.

44. (Previously Presented) A communication network as set forth in Claim 43, and further comprising another transponder interposed in the at least one first alternate communication path.

45. (Previously Presented) A communication network as set forth in Claim 37, wherein the first and second controllers are coupled together through the at least one second link, the second controller also is responsive to the second detector detecting the failure in the second communication path for notifying the first controller of the failure, and wherein the first controller responds thereto by coupling the at least one first alternate communication path to a corresponding first link.

46. (Original) A communication network as set forth in Claim 40, wherein each first terminal transmits signals over only those ones of the first and second links that are coupled to the terminal and determined to be active by that terminal.

47. (Currently Amended) A communication network as set forth in Claim 36, wherein the first detector detects the failure ~~in the at least one first communication path~~ by detecting a loss of light ~~in that path~~.

48. (Currently Amended) A method for operating at least one line node coupled between a pair of terminals of a communication network through respective links, comprising:

receiving signals at the line node from a first one of the terminals through a first one of the links;

splitting the received signals into corresponding signal portions and forwarding a first one of the signal portions through at least one first communication path towards a

second one of the terminals and forwarding a second one of the signal portions through an alternative communication path to a switch without splitting the second one of the signal portions through another splitter, the switch being capable of connecting the first and second terminals;

monitoring a predetermined point in the at least one first communication path for a failure in the at least one first communication path; and

in response to detecting a failure in the at least one first communication path, routing the second one of the signal portions through the alternate communication path towards the second terminal via the switch.

49. (Previously Presented) A method as set forth in Claim 48, further comprising notifying another node in the communication network of the detected failure.

50. (Previously Presented) A method as set forth in Claim 48, wherein the monitoring operation includes monitoring for a loss of light in the at least one first communication path.

51. (Previously Presented) A method as set forth in Claim 48, wherein the routing operation includes operating the switch to couple the second signal portion to one of the links which is coupled to the second terminal.

52. (Previously Presented) A method as set forth in Claim 51, further comprising:

detecting when the at least one first communication path becomes active again; and

in response to detecting that the at least one communication path has become active again, further operating the switch to de-couple the second signal portion from the second link.

53. (Previously Presented) A method as set forth in Claim 48, wherein the line node is coupled to the second terminal through a second one of the links and at least one other line node, and the second signal portion is routed towards the second terminal through the second link and the other line node, and further comprising:

the line node notifying the other line node of the detected failure; and

in response to the other line node being notified of the detected failure and receiving the second signal portion, routing the second signal portion towards the second terminal through another alternate communication path residing in the other line node.

54. (Previously Presented) A method as set forth in Claim 48, and further comprising coupling, through a multiplexing device, the routed second signal portion and the first signal portions onto a second one of the links coupled to the second terminal.

55. (Currently Amended) A method for operating at least one line node of a communication network, the line node having a plurality of communication paths, each of which is coupled at a first end thereof through a first link to a first interface of a respective one of a plurality of first terminals, each communication path having a second end coupled

through at least one second link to at least one second terminal, the line node also being coupled to a separate second interface of each first terminal through at least one third link, each first, second, and third link being communicatively bidirectional, the method comprising:

monitoring a predetermined point in at least one of the communication paths for a failure in the at least one ~~of the~~ communication ~~path~~ paths; and

in response to detecting a failure in at least one of the communication paths, ~~switchably coupling~~ operating a switchable component that has a first terminal connected to the at least one second link and a plurality of second terminals each connected to a respective one of the third links, to switchably couple a corresponding at least one of the third links to the at least one second link through the switchable component.

56. (Previously Presented) A method as set forth in Claim 55, further comprising:

detecting the failure in the at least one communication path at the first terminal coupled to that path; and

in response to detecting the failure at the first terminal, providing a signal from the second interface of the first terminal to the line node through the third link coupled to the first terminal.

57. (Previously Presented) A method as set forth in Claim 55, further comprising notifying another node in the communication network of the detected failure.

58. (Canceled)

59. (Previously Presented) A method as set forth in Claim 55, wherein the monitoring operation is performed in at least one other line node of the network.

60. (Currently Amended) A method as set forth in Claim 59, further comprising notifying the line node of the failure in response to the other line node detecting a failure in the at least one communication path, and wherein the ~~switchably coupling operation~~ operating is performed in response to the notifying operation.

61. (Currently Amended) A method as set forth in Claim 55, wherein the switchable component includes a transponder ~~a transponder is included in each of the communication paths, and wherein in response to the failure being detected in the at least one communication path, the transponder included in that path is disabled~~.

62. (Previously Presented) A method as set forth in Claim 61, further comprising:

detecting when the failed communication path becomes active again; and

in response to detecting that the failed communication path has become active again, enabling the transponder included in that path.

63. (Currently Amended) A method as set forth in Claim 61, further comprising prior to the monitoring operation:

providing at least one coupler having a first terminal and a plurality of second terminals in the line node;

coupling the first terminal of the at least one coupler to the at least one second link; and

coupling each second terminal of the at least one coupler to a respective one of the third links; and

coupling a further transponder between the first terminal of the at least one coupler and the at least one second link, and wherein the ~~switchably coupling operation~~ operating is performed by enabling the further transponder.

64. (Previously Presented) A method as set forth in Claim 55, wherein the monitoring operation includes monitoring for a loss of light in the at least one communication path.

65. (Currently Amended) A method for operating at least one line node of a communication network, the line node having a plurality of communication paths, at least a first one of which is coupled at a first end thereof through a first link to a first interface of a respective one of a plurality of first terminals, the at least one first communication path also having a second end coupled through at least one second link to at least one second terminal, wherein the line node also is coupled to a second interface of each first terminal

through at least one third link, and wherein at least a second one of the communication paths is coupled at a first end thereof to at least one third terminal through at least one fourth link, and is also coupled at a second end thereof to the at least one second link, the method comprising:

receiving signals at the line node from ~~at least one of the first and third terminals~~ the third terminal over the ~~first or~~ fourth link~~, respectively~~;

bidirectionally transferring signals communicated between the first and second terminals, through the first link, the first communication path, and the second link,

splitting signals received over the fourth link into corresponding signal portions and forwarding a first one of the signal portions through the second communication path towards the second terminal, and not splitting signals traversing the first communication path;

monitoring for a failure in at least one of the first and second communication paths;

in response to detecting a failure in the at least one first communication path, ~~coupling~~ operating at least one switch to couple a corresponding third link to the at least one second link; and

in response to detecting a failure in the second communication path, ~~routing~~ operating at least one switch to route a second one of the signal portions through an alternate communication path towards the second terminal.

66. (Previously Presented) A method as set forth in Claim 65, further comprising notifying another node in the communication network of the detected failure.

67. (Previously Presented) A method as set forth in Claim 65, wherein the monitoring includes monitoring for a loss of light in the at least one communication path.

68. (Previously Presented) A method as set forth in Claim 65, wherein the monitoring is performed in at least one other line node of the network.

69. (Currently Amended) A communication network, comprising:

a plurality of first communication terminals;

at least one second communication terminal;

a plurality of communication links; and

at least one first node, bidirectionally coupled to each of the first communication terminals through a corresponding first one of the communication links and a separate corresponding second one of the communication links, the at least one first node also being coupled to at least one second terminal through at least a third one of the communication links, the at least one first node comprising:

a plurality of communication paths, each for routing signals being communicated between a corresponding one of the first communication terminals and the at least one second terminal, each communication path having a first end coupled to a respective one of

the first communication links and a second end coupled to the third communication link,

a switch having a plurality of first terminals and a second terminal, each of the first terminals being coupled to a respective one of the second communication links, the second terminal being coupled to the third communication link, and

a controller, coupled to the switch, and being responsive to applied input information for controlling the switch to couple a corresponding one of the second communication links to the third communication link for providing an alternate route through those links for routing the signals,

wherein each communication link is communicatively bidirectional.

70. (Previously Presented) A communication network as set forth in Claim 69, wherein each of the first communication terminals provides signals to the first node over either the first or second communication link coupled thereto, depending on which link is determined to be active by that first communication terminal.

71. (Previously Presented) A communication network as set forth in Claim 69, wherein each of the first communication terminals accepts signals from either the first or second communication link coupled thereto, depending on which link is determined to be active by that first communication terminal.

72. (Previously Presented) A communication network as set forth in Claim 69, wherein the first node further comprises a detector for detecting a failure in at least one of the communication paths, the first node is coupled to the at least one second communication terminal through both the third communication link and at least one other node, and the controller is coupled to an output of the detector and to the at least one other node, and is responsive the detector detecting the failure for notifying the at least one other node of the detected failure.

73. (Previously Presented) A communication network as set forth in Claim 69, wherein the first node is coupled to the at least one second communication terminal through both the third communication link and at least one other node, wherein the controller is coupled to the at least one other node, and is responsive to receiving from the other node information indicating that a failure has been detected in that other node for controlling switch to couple a corresponding one of the second communication links to the at least one third communication link.

74. (Previously Presented) A communication network as set forth in Claim 69, further comprising a multiplexer/demultiplexer interposed between the third communication link and the plurality of communication paths, the multiplexer/demultiplexer having a terminal coupled to the third communication link and a plurality of other terminals each of which is coupled to the second end a respective one of the communication paths.

75. (Previously Presented) A communication network as set forth in Claim 69, further comprising a plurality of transponders, each of which is interposed in a respective one of the communication paths.

76. (Previously Presented) A communication network as set forth in Claim 75, further comprising another transponder interposed between an output of the switch and the third communication link.

77. (Previously Presented) A communication network as set forth in Claim 76, further comprising a multiplexer/demultiplexer interposed between the third communication link and the communication paths, the multiplexer/demultiplexer having one terminal coupled to the third communication link and a plurality of other terminals, each of which is coupled to a respective one of the transponders.

78. (Previously Presented) A communication network as set forth in Claim 75, wherein the controller is responsive to the applied input information indicating that a failure has been detected in at least one of the communication paths for controllably disabling the transponder interposed in that at least one communication path.

79. (Previously Presented) A communication network as set forth in Claim 78, wherein the controller also is responsive to applied input information indicting that the at

least one communication path has become active for controllably enabling the transponder interposed in that at least one communication path.

80. (Previously Presented) A communication network as set forth in Claim 69, further comprising a second node, wherein the first node is coupled to the at least one second communication terminal through both the third communication link and the second node, and there are a plurality of the second communication terminals, wherein the second node is coupled to each second communication terminal through both a fourth one of the communication links and a fifth one of the communication links, and wherein second node comprises:

a plurality of further communication paths for routing signals being communicated between the first and second communication terminals through the second node, each further communication path having a first end coupled to the third communication link and a second end coupled to a respective fourth communication link;

a further switch having a plurality of first terminals and a second terminal, each of the first terminals of the further switch being coupled to a respective fifth communication link, the second terminal of the further switch being coupled to the third communication link; and

a further controller, coupled to the at least one detector and to the further switch, and being responsive to applied input information indicating that a failure has been detected in at least one of the further communication paths for controlling the further switch to couple a corresponding one of the fifth communication links to the third

communication link, for providing an alternate route through those links for routing the signals.

81. (Previously Presented) A communication network as set forth in Claim 80, wherein the controller of the first node is coupled to the further controller of the second node, and the further controller notifies the controller of a detection of a failure in a communication path.

82. (Previously Presented) A communication network as set forth in Claim 80, wherein the controller also is coupled to the further controller, and the controller is responsive to receiving from the further controller an indication that a failure has been detected in one the further communication paths for controlling the switch to couple a corresponding one of the second communication links to the third communication link, for providing an alternate route for routing the signals through those links.

83. (Previously Presented) A communication network as set forth in Claim 69, wherein the at least one first node further comprises a detector for detecting a failure in at least one of the communication paths and applying the input information to the controller.

84. (Previously Presented) A communication network, comprising:

a plurality of communication terminals, including at least a first communication terminal, a second communication terminal, and a third communication terminal;

a plurality of communication links; and

at least one node, coupled to (a) the first communication terminal through both a first one of the communication links and a second one of the communication links, (b) the second communication terminal through each of a third one of the communication links, a fourth one of the communication links, and a fifth one of the communication links, and (c) the third communication terminal through at least one sixth communication link, the at least one node comprising:

a plurality of communication paths for routing signals being communicated between the first and third communication terminals and between the second and third communication terminals through the at least one node, the communication paths including a first communication path, a second communication path, and a third communication path, each first communication path having a first end coupled to the first communication link and a second end coupled to the at least one sixth communication link, each second communication path having a second end coupled to the at least one sixth link, and each third communication path having a first end coupled to the third communication link and a second end coupled to the at least one sixth link,

at least one splitter, each at least one splitter having an input and first and second outputs, the input and first output of the at least one splitter being coupled in a corresponding one of the first communication paths,

a first switch having an input terminal coupled to the at least one sixth communication link, and a plurality of output terminals, at least one of which is coupled to the fifth communication link,

a plurality of second switches, a first input terminal of at least one of the second switches being coupled to the second output of a corresponding one of the splitters, a second input terminal of that at least one second switch being coupled to the fourth communication link, and an output terminal of that at least one second switch being coupled to the at least one sixth link, and wherein a first input terminal of at least one other second switch is coupled to a first end of a corresponding one of the second communication paths, a second input terminal of that at least one other second switch is coupled to a corresponding one of the output terminals of the first switch, and an output terminal of that at least one other second switch is coupled to the second communication link,

a controller being responsive to applied input information indicating that a failure has been detected in at least one of the first, second, or third communication paths for controlling one or more of the first and second switches to couple either the second output of a corresponding splitter, or the second, fourth, or fifth communication link, to the at least one sixth communication link, for routing signals therethrough.

85. (Previously Presented) A communication network as set forth in Claim 84, wherein the controller is responsive to the applied input information for controlling the at least one second switch to couple the second output of the splitter to the at least one sixth communication link.

86. (Previously Presented) A communication network as set forth in Claim 84, wherein the controller is responsive to applied input information indicating that a failure has been detected in the second communication path for controlling the first switch and the at least one other second switch to couple the at least one sixth communication link to the second communication link.

87. (Previously Presented) A communication network as set forth in Claim 84, wherein the controller is responsive to applied input information indicating that a failure has been detected in the third communication path for controlling either the first switch to couple the at least one sixth communication link to the fifth communication link, or the at least one second switch to couple the fourth communication link to the at least one sixth communication link.

88. (Currently Amended) A method for operating a communication network comprising at least one line node coupled to at least two communication terminals, the method comprising:

forwarding a signal from a first one of the communication terminals towards a second one of the communication terminals through the at least one line node; and

within the at least one line node,

splitting the signal into corresponding signal portions and forwarding a first one of the signal portions through at least one first communication path towards the second communication terminal and forwarding a second one of the signal portions through an

alternative communication path to a switch without splitting the second one of the signal portions through another splitter, the switch being capable of connecting the first and second terminals;

monitoring a predetermined point in the at least one first communication path for a failure in the at least one first communication path; and

in response to detecting a failure in the at least one first communication path, routing the second one of the signal portions through the alternate communication path towards the second communication terminal via the switch.

89. (Currently Amended) A method for operating a communication network comprising a plurality of first communication terminals, at least one second communication terminal, and a plurality of communication links, the method comprising:

providing at least one node in the communication network coupled to each of the first communication terminals through a corresponding first one of the communication links and a corresponding separate, second one of the communication links, the at least one node comprising a plurality of communication paths, each for routing signals being communicated between a corresponding one of the first communication terminals and the at least one second terminal, each communication path having a first end coupled to a respective first communication link and a second end coupled to a third communication link, the at least one node also comprising a switch having a plurality of first terminals and a second terminal, each of the first terminals of the switch being coupled to a respective

one of the second communication links, the second terminal of the switch being coupled to the third communication link; and

within the at least one line node,

detecting a failure in at least one of the communication paths by monitoring a predetermined point in the at least one communication path; and

in response to detecting a failure in a communication path, controlling the switch to couple a corresponding one of the second communication links to the third communication link, for providing an alternate route through those links for routing the signals,

wherein each communication link is communicatively bidirectional.